Promises as Commitments

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Abstract

We implement a trust game in which the trustee can write a free-form pre-play message for the trustor. The main twist in our design is that there is a 50% probability that the message is delivered to the trustor and a 50% probability that the message is replaced by an empty sheet. We find that even when messages are not delivered trustees who make a promise are significantly more likely to act trustworthy than those who do not make a promise. This suggests that a promise has a commitment value which is independent of its impact on the trustor. Interestingly, we also find that both trustees who make a promise and those who do not make a promise are more likely to be trustworthy if their message is delivered to the trustor. This means that communication increases trustworthiness irrespective of the content of messages.

Keywords: Promises, communication, trust, beliefs, experimental economics.

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1 Introduction

Experimental evidence has shown that pre-play messages from trustees to trustors enhance trustworthy behavior. Charness and Dufwenberg (2006) provide an explanation for this impact of messages on trustee behavior that is based on *expectations based guilt aversion theory*. By sending a promise to act cooperatively the trustee increases the expectations of the trustor that the trustworthy action will, in fact, be chosen. This increase in expectations of the trustor, in turn, makes the trustee feel guiltier in case he or she were to choose the non-cooperative action. Thus, the attractiveness of the non-cooperative action diminishes for the trustee when a promise is made. We call this the *expectation-based explanation* for promise keeping in line with Vanberg (2008).

There is, however, disagreement regarding the validity of this explanation. Vanberg (2008) tests the *expectation-based explanation* and rejects it. Vanberg (2008) shows that in a modified version of the dictator game higher expectations of recipients do not make cooperative behavior by dictators more likely if these expectations are driven by promises made by other dictators.[1] Vanberg (2008) thus rejects the *expectations-based explanation* and concludes that people keep promises because of a preference for keeping their word per se. We call this the *commitment-based explanation* for promise keeping as in Vanberg (2008).

Ellingsen et al. (2010) test the *expectations based guilt aversion theory* in a setup without pre-play messages. The authors first ask trustors about their expectations and later reveal those to trustees before they make a choice. The results show that trustee behavior is not affected by the expectations of the trustor. This evidence rejects *expectations based guilt aversion theory* which is the basis for the *expectation-based explanation* for promise keeping.

It should be noted that authors who advocate the *commitment-based explanation* do it by rejecting the *expectation-based explanation* for promise keeping. There is no direct test of the *commitment-based explanation*, though.

In this paper, we report experimental evidence in support of the *commitment-*

[1]The design of the experiment is such that even when dictators are matched with a recipient to whom they did not send a message they can infer whether the expectations of the recipient were shifted or not. For details see Vanberg (2008).

based explanation. In our experimental trust game trustees had an opportunity to write a pre-play free-form message to trustors. The essence of our design is that a message written by the trustee was delivered to the trustor with probability $\frac{1}{2}$. When writing a message the trustee knew that it might not be delivered to the trustor. After the message was written, a random draw was made and the trustee learned whether his or her message would be delivered or not. Thus, in our experiment 50% of the trustees wrote a message that was not delivered to the trustors. The messages written by the other 50% were delivered to their respective trustors. Within both groups some trustees made a promise and some did not make a promise.

We find that a written promise was more likely to be kept if it was delivered to the trustor (59%) than if it was not (39%). Interestingly, we also find that trustees who did not make a promise were more likely to be trustworthy if their message was delivered (45%) than if it was not (11%). The fact that a message was delivered enhanced trustworthiness irrespective of whether a promise was made or not. This suggests that the positive impact of communication on trustworthiness does not depend on the content of the message.

These results also show that making a promise increased trustworthiness of the trustee by 14% (from 45% to 59%) if the message was delivered, and by 28% (from 11% to 39%) if the message was not delivered. By design, if the message was not delivered, a promise could not have affected the trustor. This result supports the *commitment-based explanation* for promise keeping.

2 Experimental Design and Procedure

2.1 Experimental Design

Our experiment is based on the trust game of Charness and Dufwenberg (2006), as depicted in Figure 1. There are two players in this game, A and B. First, A chooses to play *In* or *Out*. Next, B chooses *Roll* or *Don't Roll* a six sided die. If A chooses *Out*, then B's choice is irrelevant and both players get 5 Euros. If A chooses *In* and B chooses *Don't Roll*, A receives 0 and B receives 14 Euros. Finally, if A plays *In* and B plays *Roll*, then B gets 10 Euros and rolls a six sided

die to determine the payoff to A. A receives 12 Euros with probability $\frac{5}{6}$ and 0 with probability $\frac{1}{6}$.

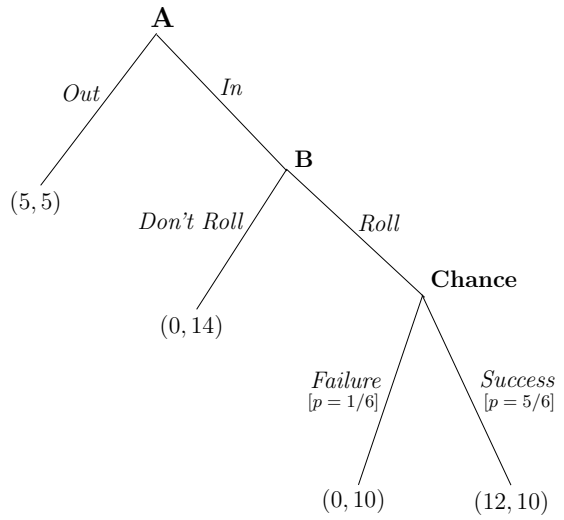

Figure 1: Trust game of Charness and Dufwenberg (2006)

As in Charness and Dufwenberg (2006), we allow B to write a pre-play message to A. However, in our design with probability $\frac{1}{2}$ a message written is not delivered to A. This is known to both A and B. After writing a message, B learns whether his message will be delivered to A or not from the outcome of a random draw. If A receives no message, A knows that the message by B was not chosen to be delivered. The timeline for the pre-play message stage is shown in Figure 2. After the pre-play message stage, the trust game depicted above is played. Instructions are provided in Appendix A.

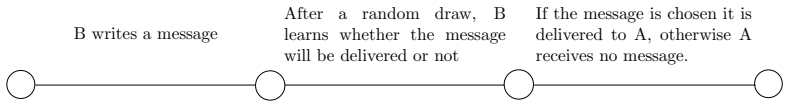

Figure 2: Timeline of the pre-play message stage

With this design, we obtain observations where messages from B are not delivered and observations where messages from B are delivered. In what follows we call the former the *Message not delivered* condition and the latter the *Message delivered* condition. Within both conditions there will be some Bs who make a promise to *Roll* and some who do not make a promise to *Roll*. Note that in the *Message not delivered* condition a promise made by B cannot affect A.

Table I presents predicted *Roll* rates under the *commitment-based explanation*. In the *Message delivered* condition one would expect a higher *Roll* rate with promises than with no promises. In the *Message not delivered* condition we, similarly, expect a higher *Roll* rate with promises than no promises given that people have a preference for keeping their word per se. No effect of messages being delivered is predicted on those who make a promise nor on those who do not make a promise.

Table I

Predictions under the commitment-based explanation

	B's *Roll* rate		
Condition	Promise		No Promise
Message not delivered	Y%	$>$	X%
	$=$		$=$
Message delivered	Y%	$>$	X%

Table II

Predictions under the expectations-based explanation

	B's *Roll* rate		
Condition	Promise		No Promise
Message not delivered	X%	$=$	X%
	$<$		$=$
Message delivered	Y%	$>$	X%

Table II presents predictions under the *expectations-based explanation*. Basically, under the *expectation-based explanation Roll* rates should follow the second-order beliefs of trustees. In the *Message delivered* condition the prediction is

similar to that under the *commitment-based explanation*. In the *Message not delivered* condition the *Roll* rates for trustees who make a promise and trustees who do not make a promise are predicted to be same given that we do not expect any difference in second-order beliefs between the two groups. One would also expect no difference in second-order beliefs of trustees who do not make a promise in the *Message not delivered* condition and in the *Message delivered* condition and thus similar *Roll* rates. To be able to test these predictions we elicit subjects' beliefs (details are provided in Appendix B).

2.2 Experimental Procedure

The experiment was conducted at the CenterLab, Tilburg University. Subjects were students recruited via email invitations. 10 sessions were conducted with a total of 216 participants (there were 20 subjects per session in 6 sessions, and 24 subjects per session in 4 sessions). Average earnings were around 11 Euros per session (including a 3 Euros show-up fee). The duration of each session was approximately one hour.

Subjects were seated behind visually partitioned workstations upon arrival. At the beginning the instructions were distributed and read aloud. Questions were answered privately. Half of the subjects were assigned the role of A and the other half the role of B. Each A was matched with a B to form a pair. Sheets with identification numbers and a letter B on top were distributed to all Bs. Each B knew his or her identification number, but no other subject did. We allowed enough time for all Bs to write a message to A in his or her pair. If B did not want to write a message he or she could circle the letter B on top of the sheet. After all Bs finished writing a message and put their message sheets face down, the experimenter collected all message sheets. The experimenter quickly checked the compliance of the messages with anonymity rules. Then, the identification numbers of all Bs were shuffled and exactly half of them were randomly chosen and publicly revealed. With this procedure it was common knowledge to both A and B whether the message was delivered or not. The messages of those Bs whose numbers were chosen were distributed to the respective As. The message sheets of Bs whose messages were not chosen were replaced by empty sheets. Thus,

in all pairs A received a sheet, either empty or with a message, depending on whether a message was chosen to be delivered in that pair or not. Note that an empty sheet was different from delivered message without text, since the latter had the letter B circled on top. The identity of subjects in pairs was not revealed at any time.

After the messages were delivered to the respective As, the game depicted in Figure 1 was played using the strategy method. That is B chose *Roll* or *Don't Roll* before knowing A's choice for *In* or *Out*. Unlike the pre-play message stage, the actual game stage was computerized using Z-tree software (Fischbacher 2007). Subjects entered choices on their screens. After choices were made by all As and Bs the experimenter approached each B to roll a die. To ensure anonymity all Bs rolled a die irrespective of their choice and entered the outcome of the die roll on their screen. The game was played for one round only. After the payoffs were realized subjects were paid privately and in cash.

To elicit beliefs subjects could earn money by correctly guessing the outcome of the game. We followed closely Vanberg (2008) in revealing beliefs of players with some minor differences to ensure that A would not be able to infer whether B rolled or not from the payoff received for guessing. For details see Appendix B.

3 Results

In total we obtained observations for 108 pairs, 54 pairs each in the *Message not delivered* condition and in the *Message delivered* condition. We coded each message as a promise or no promise. The classification is available in Appendix C. For both conditions combined, 70 out of 108 Bs (65%) made a promise to *Roll*: 36 out of 54 Bs (67%) in the *Message not delivered* condition and 34 out of 54 Bs (63%) in the *Message delivered* condition.

Table III presents the *Roll* rates by Bs who made a promise and by Bs who did not for each condition separately and for the combined data. For trustees who made a promise the *Roll* rates were significantly higher if a promise was delivered to the trustor than if it was not (59% vs 39%). Note, however, that there was also a positive effect of the message being delivered on *Roll* rates of trustees who

Table III

PROMISES AND *Roll* RATES[a]

	B's *Roll* rate			
Condition	Promise	No Promise	Z stat	Row total
Message not delivered	14/36	2/18	2.11**	16/54
	(39%)	(11%)		(30%)
Message delivered	20/34	9/20	0.98	29/54
	(59%)	(45%)		54%
Z stat	1.67**	2.30**	—	2.54***
Column total	34/70	11/38	1.98**	45/108
	(49%)	(29%)		(42%)

[a] The Z stat reflects two sample proportion test for the two populations. *, **, and *** denote significance at p<0.10, p<0.05, and p<0.01 respectively for one tailed test.

did not make a promise (45% vs 11%). In other words, we observe increased *Roll* rates with communication not only for trustees who made a promise but also for trustees who did not make a promise.

From the table we can also observe the differences in *Roll* rates between trustees who made a promise and trustees who did not make a promise. For the combined data, the *Roll* rates are higher for those who made a promise (49%) than for those who did not (29%) and this difference is statistically significant. In the *Message delivered* condition there was, also, a correlation between promises and choices. Here, for Bs the magnitude of the difference in *Roll* rates is 14%, but it is statistically insignificant. In fact, this result is close to that obtained for the (5,5) *Messages* treatment in Charness and Dufwenberg (2006). In the *Message not delivered* condition the *Roll* rates by Bs are significantly higher for those who made a promise (39%) than for those who did not (11%). The fact that promises are correlated with choices even when they are not delivered provides support for the *commitment-based explanation* for the promise keeping. In the discussion

section we elaborate more on this result.

Table IV

Estimates of logit regressions[a]

	(1)	(2)
Variables	Roll	Roll
Promise	1.63**	1.83**
	(0.82)	(0.86)
Message delivered	1.88**	1.89**
	(0.87)	(0.91)
Promise x Message delivered	-1.07	-1.25
	(1.00)	(1.05)
Second-order belief		0.68***
		(0.20)
Constant	-2.08***	-4.30***
	(0.75)	(1.06)
Log likelihood	-67.13	-60.44

[a] Standard errors are in parentheses. Number of observations is 108 for both regressions. *, **, and *** denote significance at p<0.10, p<0.05, and p<0.01 respectively.

To further analyse the results for trustees (Bs), we ran logit regressions. The estimates are reported in Table IV. The estimated coefficients confirm that promises and *Roll* rates are correlated (p<0.05). In addition, there is a positive and significant effect of the messages being delivered (communication). Importantly, the interaction effect between the promise dummy and the message delivered dummy is insignificant indicating that the effect of the promises did not depend on messages being delivered or vice versa. The estimated coefficients are hardly affected when we control for the second-order beliefs of trustees. This means that the positive effects of promises and the messages being delivered (communication) cannot be explained by changes in second-order beliefs of trustees. We describe how we measured beliefs, and report some additional results, in Appendix B.

Finally, table V reports results for As. One can see that As were more likely to play *In* when they received a promise (76%) than when they received a message

with no promise (55%). Interestingly, even when messages contained no promise As were more likely to play *In* (55%) than when they received no message at all (31%) (Z stat=1.85, two sample proportion test, p<0.05, one tailed).

Table V

PROMISES AND *In* RATES[a]

	A's *In* rate			
Condition	Promise	No Promise	Z stat	Combined
Message not delivered	17/54			17/54
	(31%)		—	(31%)
Message delivered	26/34	11/20	1.64**	37/54
	(76%)	(55%)		(69%)

[a] The Z stat reflects two sample proportion test for the two populations. *, **, and *** denote significance at p<0.10, p<0.05, and p<0.01 respectively for one tailed test.

4 Discussion

In our experiment promises and trustworthiness are correlated even when messages are not delivered. We argue that this is in support of the *commitment-based explanation*: i.e. that there is a cost of breaking one's promise per se.

First, note that if promises were correlated with second-order beliefs of trustees when messages were not delivered, then we cannot reject the *expectation-based explanation*. In other words, it might be that those who made a promise had higher second-order beliefs than those who did not make a promise even when messages were not delivered. However, in Appendix B we show that when messages were not delivered promises were not correlated with second-order beliefs. The average second-order beliefs were equal for those who made a promise and those who did not. This means that the positive correlation between promises and Roll rates cannot be explained by changes in second-order beliefs.

Second, it might be argued that when messages were not delivered promises might be correlated with trustworthiness not because of a cost of breaking a

promise per se but because the messages were observed by the experimenter. While our experimental procedures were not double blind, it was practically impossible for the experimenter to remember all messages sent by trustees and then map them to individuals and choices. Note that the messages were handwritten while the choices for the trust game were entered on the computer screen. This was made clear to subjects in instructions. Additional evidence is provided by Deck et al. (2011). The authors ran a double blind protocol of the trust game with pre-play messages and found similar results to those of Charness and Dufwenberg (2006). This result suggests that 'an experimenter effect' is not an issue in the trust game with pre-play messages.

Third, one can argue that the correlation we observe between promises and trustworthiness when messages are not delivered is possibly due to self selection. By this argument, those who make a promise are more likely to be trustworthy not because they are affected by the promise made but because trustworthy trustees are more likely to make a promise than untrustworthy ones. However, we argue that to observe this kind of self selection one still needs to assume that for some trustees there is a cost of breaking a promise even when it is not delivered. To see this, note that our results show that for trustees who do not make a promise a message being delivered increases trustworthiness. This suggests that some trustees write no promise, choose *Don't Roll* if the message is not delivered, and choose *Roll* if the message is delivered (call this strategy (*no promise, Don't Roll, Roll*)). Given that making a promise makes it more likely that the trustor will trust if the message is delivered and that there is no cost of breaking a promise if the message is not delivered, this strategy is dominated by the strategy write a promise, *Don't Roll* if the message is not delivered, and *Roll* if the message is delivered (*promise, Don't Roll, Roll*). By not making a promise the trustee reduces the likelihood that the trustor plays *In* and there is no cost of breaking a promise. However, if one assumes that there is a cost of breaking a promise even when the message is not delivered, then it is not necessarily true that the strategy (*promise, Don't Roll, Roll*) dominates the strategy (*no promise, Don't Roll, Roll*). This is because in this case the benefit of making a promise (increased probability of trustor playing *In* if the message is delivered) is countered by the cost of breaking a promise (choosing *Don't Roll*) when the

message is not delivered.

Finally, somewhat unexpectedly we find that trustees who did not make a promise were more likely to act trustworthy when their message was delivered than when it was not.[2] This shows that the effect of communication on the trustworthiness of trustees does not depend on the content of the message (on a promise). One possible explanation for this positive effect of messages being delivered could be that it reduces the social distance between the trustee and the trustor. The fact that something (a sheet of paper) that was in the trustee's possession is later in the trustor's hands may create some commonality.

5 Conclusion

In this paper we provide experimental evidence in support of the *commitment-based explanation* for promise keeping. Our results suggest that people have a preference for keeping their word per se. The *expectations based guilt aversion theory* cannot explain the results we obtain. In addition, we show that the impact of communication on trustworthiness does not depend on the content of the message. Communication increases trustworthiness both for trustees who make a promise and for trustees who do not make a promise.

[2]Even trustees who wrote nothing on their message sheet were more likely to act trustworthy when their message sheet was delivered than when it was not (4 out of 7 when delivered compared to 0 out of 7 when not delivered).

A Instructions

We tried to stay as close as possible to the instructions in Charness and Dufwenberg (2006).

Instructions

Thank you for participating in this session. The purpose of this experiment is to study how people make decisions in a particular situation. Feel free to ask us questions as they arise, by raising your hand. Please do not speak to other participants during the experiment.

You will receive €3 for participating in this session. You may also receive additional money, depending on the decisions made (as described below). Upon completion of the session, your money will be paid to you individually and privately.

During the session, you will be paired with another person. However, no participant will ever know the identity of the person with whom he or she is paired.

Decision tasks

In each pair, one person will have the role of A, and the other will have the role of B. The amount of money you earn depends on the decisions made in your pair. Those sitting behind desks 1-12 have the role of A; those sitting behind desks 13-24 are B.

By clicking a button on the computer screen, each person A will indicate whether he or she wishes to choose IN or OUT. If A chooses OUT, then A and B each receives €5. Next, each person B will indicate whether he or she wishes to ROLL or DON'T ROLL (a die). Note that B will not know whether A has chosen IN or OUT; however, since B's decision will only make a difference when A has chosen IN, we ask B's to presume (for the purpose of making a decision) that A has chosen IN.

If A chooses IN and B chooses DON'T ROLL, then B receives €14 and A receives €0. If A chooses IN and B chooses ROLL, then B receives €10 and rolls a six-sided die to determine A's payoff. If the die comes up 1, A receives 0; if the die comes up 2-6, A receives €12. (All of these amounts are in addition to the €3 show up-fee.)

Note that to conceal the identity of Bs who choose DON'T ROLL, every B will roll a die after making a choice. However, the outcome of a die roll will be irrelevant for those who choose DON'T ROLL.

The information on payoffs is summarized in the chart below:

	A receives	B receives
A chooses OUT	€5	€5
A chooses IN, B chooses DON'T ROLL	€0	€14
A chooses IN, B chooses ROLL, die = 1	€0	€10
A chooses IN, B chooses ROLL, die =2,3,4,5 or 6	€12	€10

Pre-play message stage

Prior to the decision by A and B concerning IN or OUT, B has an option to send a message to A. Each B receives a blank sheet on which a message can be written, if desired. We allow time as needed for people to write messages, then these will be collected. Please write clearly if you wish to send a message to A.

In these messages, no one is allowed to identity him or herself by name or number or gender or appearance. (The experimenter will monitor the messages. Violations - experimenter discretion - will result in B receiving only the show-up fee, and the paired A receiving the average amount received by other A's.) Other than these restrictions, B may say anything he or she wishes in this message. If you wish to not send a message, simply circle the letter B at the top of the sheet.

When B has completed the message, he or she should put it face down on the table. The experimenter will then collect the message and check it.

Important: After all messages have been collected, exactly half of them will be randomly chosen by the experimenter. The messages not chosen will be replaced with empty sheets (i.e., without the letter B on top). Then, the experimenter will distribute the messages and empty sheets to the corresponding As. If A receives an empty sheet, it means that the message by B in his or her pair was not selected to be delivered. The identification numbers of all messages chosen will be written on the whiteboard so that each B knows whether or not his or her message will be delivered to A.

Bonus for guessing

At some point during the experiment, you can earn a bonus of up to €1.50 by correctly guessing a decision or outcome. You will receive the necessary information on your screen.

Information

Each player will know only her or his own earnings at the end of the experiment. Other than what can be concluded from these earnings, you will not receive any other information.

B Beliefs, Choices, and Behavior

As mentioned in the main text, we measured beliefs of As and Bs during the experiment. In measuring beliefs we followed Vanberg(2008) with some minor differences. To elicit first-order beliefs, after As made a choice to play *In* or *Out*, we asked them to guess the actual payoff of the trust game in case they chose *In* or what would be their payoff had they chosen *In* in case they chose *Out*. Note that unlike Vanberg (2008) we asked A to guess the (would be) payoff of the game rather than the choice by B. We wanted to prevent A from being able to infer B's choice from the bonus payment for guessing.[3] Each A was shown a screen with the explanation of the task, and the information shown in Table B.I, and was asked to choose one of the five columns from the table. Each column shows bonus payments that depend on the (would be) final payoff of the trust game. This way we elicited first-order beliefs of A regarding the (would be) outcome of the game.[4] [5]

To elicit second-order beliefs of Bs, they were shown the screen that was shown to A and invited to guess the column chosen by A. For the correct guess B earned a bonus of €1.50.

We, first, start with reporting the results on the relationship between beliefs and choices made for both As and Bs. Then, we show the relationship between beliefs and promises.

Table B.II reports average beliefs for As and Bs depending on the condition and choices made. In both conditions, the average beliefs of As who played *In* were higher than those of As who played *Out*. The differences are significant at the 10% level as shown in the table. Moreover, in both conditions, the average guesses of Bs who chose *Roll* were higher than those of Bs who chose *Don't Roll*. The differences are statistically significant. Similar results are reported in

[3]This is not a problem in Vanberg (2008) because in his experiment subjects played for eight rounds and different rounds were randomly chosen for game payoff and guessing bonus payments.

[4]Assuming risk neutrality the columns correspond to intervals with midpoints at probabilities 87.5%, 67.5%, 50%, 32.5%, and 12.5% of receiving 0 as payoff.

[5]We did not consider hedging to be a problem. Blanco et al.(2010) show that hedging is not a problem in a game similar to ours. This is despite the fact that they paid subjects much higher amounts for guessing than we did. The payoffs for the game itself were similar to ours.

Table B.I

Belief Elicitation

	(1)	(2)	(3)	(4)	(5)
Your guess	Almost certainly €0	Probably €0	Not sure	Probably €12	Almost certainly €12
Your bonus if you (would) receive €0	€1.30	€1.20	€1.00	€0.70	€0.40
Your bonus if you (would) receive €12	€0.40	€0.70	€1.00	€1.20	€1.30

Charness and Dufwenberg (2006).

Table B.II

Choices and Beliefs[a]

	A's average guess			B's average guess		
Condition	*In*	*Out*	Z stat	*Roll*	*Don't Roll*	Z stat
Message not delivered	48%	40%	1.55*	59%	43%	2.37***
	(17)	(37)		(16)	(38)	
Message delivered	50%	40%	1.52*	60%	46%	2.51***
	(37)	(17)		(29)	(25)	

[a] The Z stat reflects the Wilcoxon rank sum test. The number of observations is shown in parentheses. *, **, and *** denote significance at p<0.10, p<0.05, and p<0.01 respectively for one tailed test

Table B.III shows average guesses by As and Bs in each condition, depending on whether a promise was sent or received. One can see that in the *Message not delivered* condition average second-order beliefs of Bs did not depend on whether a promise was sent or not. Thus, promises were not correlated with beliefs. This shows that the impact of promises in the *Message not delivered* condition cannot be explained by a change in second-order beliefs.

Below, we also report estimates from a logit regression. In this regression we

Table B.III

PROMISES AND BELIEFS[a]

	A's average guess			B's average guess		
Condition	P	NP	Z stat	P	NP	Z stat
Message not delivered	42%		—	48%	48%	-0.13
	(54)			(36)	(18)	
Message delivered	49%	44%	0.96	55%	53%	0.31
	(34)	(20)		(34)	(20)	

[a] The Z stat reflects the Wilcoxon rank sum test. The number of observations is shown in parentheses. *, **, and *** denote significance at p<0.10, p<0.05, and p<0.01 respectively for one tailed test

estimated the impact of promises on the probability of choosing *Roll* controlling for second-order beliefs in the *Message not delivered* condition. Standard errors are reported in parentheses:

$$\begin{array}{rcccc} \text{Roll} = & -4.57 & +1.87 * \text{Promise} & +0.76 * \text{Second-order belief} \\ & (1.36) & (0.88) & (0.31) \end{array}$$

The coefficient on the promise dummy is positive and significant (p=0.03). This confirms that in the *Message not delivered* condition the positive impact of promises on trustworthiness cannot be due to changes in second-order beliefs.

C List of messages

In the table below, C = Coding, S = Status, P = Promise, NP = No Promise, D = Delivered, ND = Not Delivered, R = *Roll*, and DR = *Don't Roll*.

Table C.I
Messages from B

Sess.	ID	Message	C	S	Choice
1	11	I will roll Please choose in, I won't be as lame as to lie to you to make myself 4 euro richer and you 12 euro poorer	P	ND	R
1	12		NP	D	DR
1	13	Dear person A, I hope you receive this message I wrote for you,especially because it isn't my greatest hobby to write. I would like to encourage you to choose IN. At least I can speak for myself that I will always choose for Roll, and I think every B will do. Because then our common win is the greatest. And it has been proven that decisions based on fear are less rational and productive than decisions based on trust. So, especially because we're both on the university, we should choose for the greatest common win. I will. Good luck and have a nice day.	P	D	DR
1	14		NP	ND	DR
1	15	I am committed to do everything in my power so that BOTH of us can earn more than €5.	P	ND	R
1	16	I will choose ROLL, please choose IN	P	ND	DR
1	17	Dear A player, I know there is a risk in this game and we don't know each other, But if you choose IN I promise I will ROLL so that we can both maximize our chances to win more.Please trust me we are partners and we want the best for each other. But now,let's come to the point. I propose that you decide IN and I will definitely promise to ROLL the die, so that your chance of getting paid will be bigger than when I DON'T ROLL. Good Luck,I hope we can trust each other! your partner , B.	P	D	R

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
1	18	Hello partner! Of course I will send you a message, just because we are partners and we want the best for each other. But now, let's come to the point. I propose that you decide IN and I will definitely promise to ROLL the die, so that your chance of getting paid will be bigger than when I DON'T ROLL. Good Luck, I hope we can trust each other! your partner , B.	P	D	R
1	19	I will choose ROLL for sure that goes into the benefit of both of us. You can trust me. So you can choose IN.	P	ND	R
1	20	I will choose ROLL because this will give 100% more than if you choose OUT. Please choose IN so we can both have more earnings :). I am cool with you earning 2,- more since I will also get a lot more than just the 5,- !	P	D	DR
2	13	Please choose IN. I 'll choose Roll definitely. So we could win-win. I know that it is still take the risk for you. But I think 5/6 possibility for €12 is much better than €5, isn't it?	P	D	DR
2	14		NP	D	R
2	15	I will choose Roll, die=5	P	D	DR
2	16	Hello A, If you choose IN I'll choose Roll, so you have more chance of earning money, and I do too! Don't think negative, because that will have an negative outcome as well! (If you choose don't roll you'll probably earn less than when you choose Roll) I hope you make the right decision! B	P	D	DR
2	17	Hello. We can cooperate so that we have both have a nice pay-off. If you choose IN, than I will promise to choose to roll the die. Because your chance will be 5/6 to get €12, I think this is a good option for you too! :) Because that is the maximum amount you can earn! I hope we will have a good co-operation!:) Bye.	P	D	DR
2	18	For the better outcome, I will choose Roll. Your payoff will depend on the Die number. Otherwise, we will both receive €5.	P	D	R
2	19	I wish we could do it best. I wish you trust me. Money is important, but is not everything. I know you are facing a bigger risk. But have faith, my friend. I trust that your choice will make everything good.	NP	ND	R

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
2	20	Let's play! I don't want to stay here a whole hour for just 5 EUR. You have a 5 out of 6 chance to get 12 EUR. And I am willing to sacrifice 4 EUR (get 10 instead of 14) in order to get 5 more (get 10 instead of 5). We play together, we both win more! It's always like that at these experiments! Good luck and thanks in advance for making the right choice!:)	P	ND	R
2	21	Dear My Pair A, If you play IN, you can trust me that I choose ROLL. So, let our luck determine our earnings. By 5/6 luck, you can get 12 Euro. Love B	P	ND	R
2	22	I believe in win-win And U?	NP	ND	R
2	23		NP	ND	DR
2	24	Please choose IN, I won't cheat by choosing DON'T ROLL. I promise that I will choose ROLL. We don't want to end up with only 5 euro, right? If you choose in, and I choose roll, there is ONLY 1/6 probability that you'll get €0. But there's 5/6 prob that you'll get €10. So please choose IN	P	ND	DR
3	11	This is a typical prisoner dilemma, if you know economics. Best result only possible if we trust each other. I always rely on trust in these experiments and will do the same this time, despite the fact that there is a little risk for me if I decide to throw a dice (and no risk for you). I will ROLL. Decide to trust me or not.	P	ND	R
3	12		NP	D	R
3	13	Dear A: Please choose IN! because then the total gain for us will be maximum. It's good for everyone. Here is the outcome; If you choose Out, then total gain will only minimum amount. If you choose In, and B choose Roll, you have large possibilities to gain 12. It's quite high! Best B	NP	D	DR
3	14	The reason that we came here is to deal with risk, and also earn some money. If you decide to stop that means that we both have 5 €. So we're both equal. BUT we can go for more and I mean that the 4th alternative sounds nice because you receive 7€more, this requires risk. In the end , you choose what you think is better. We both study economics or business so we both know when we're better off. Good luck with your decision.	NP	ND	DR

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
3	15	I will choose roll. I hope that you'll choose IN. That's fair for both of us. In that case, we'll have the same expected income (€10). That's better than the case that we only receive €5 each. Best regards	P	ND	R
3	16	Hello A if you choose to be In, I will choose to roll the die, then you have a 5/6 chance of receiving €12,- if you don't choose in, you only get €5,- we will help each other thanx	P	D	R
3	17		NP	ND	DR
3	18	maximize both side's payoff	NP	ND	DR
3	19	I promise I will choose to Roll. So you are choosing between 1) Expected return = €5*100%=€5 2) Expected return = €12*5/6= €10. If I were you, I will surely choose the one with higher expected return. Anyway, you can make any choice you like. Just remember that I will certainly Roll.	P	D	R
3	20	If you choose in, I would be glad to choose Roll, maximizing our overall profit. In fact since you give the chance to win additional 5 euro when you choose IN. I won't have the incentive to deprive of your opportunity of earning 12 euro as return.	P	D	R
4	13	Good morning!	NP	D	DR
4	14	Hi A, Please choose for "IN" so I can choose for "ROLL" and we might both earn a nice amount of money. B	P	D	DR
4	15	The best situation for both of us is that you choose in, I choose roll the die. Then the total payoff is maximized. This game theory problem can be solved if we cooperate. I don't have the incentive to get 4 more to let you get nothing. So this is what I'm trying to say. Please think about getting "IN"!:)	P	D	R
4	16	It's a waste of time if we all earn €5. Also, it's not fair for you to earn nothing. So, you IN. I will ROLL. And let God decide.	P	ND	R
4	17	Apparently, no matter what your choice is, €5 is at least what I can get from. But of course I would like to ask you choose "In", not only because I can be better off, so do you. Since the chance of getting "die=1" is only 1/6, which is very small, and as a reward for what you choose, I can promise	P	ND	DR

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
		to choose "Roll". Then your payoff can be doubled, so will mine. Everybody is happy :P.			
4	18	It's better off that I choose Roll while you choose IN, even if it might mean I may end up earning less €14. but it's better than getting €5 (It's not a trick!). I know A would choose Out for safety, even If you might get 0 for die but it's a low probability.	NP	ND	DR
4	19	Hi, please choose IN!!! If you choose IN. I promise I will choose ROLL. As €10 is better than €5. And for me there is no difference of what the die will be. But for you, if you choose IN, you'll have the 5/6 possibility to get €12. It's the result of gain off.	P	ND	DR
4	20	I will choose to roll. Hope you can choose In.	P	ND	DR
4	21	Always chooses In and I will chooses Roll. Then we can get the highest payoff. Good luck with two of us! Lol!	P	D	R
4	22	If you A want to get better payoff. Please trigger to choose "IN"! Let's Roll!	P	D	R
4	23	It's okay for me to have a Revenue of €10 (at least €5 higher than a revenue of €5) So I will choose to roll the die.	P	ND	DR
4	24	If you choose IN. I will choose ROLL. Trust me!!!	P	D	R
5	11	In order to get higher payment for you and me both, I suggest you choose "in". If you choose in, you don't need to worry about I will choose "Don't Roll". In the end of the experiment, I promise the result can only be win-win.	P	ND	R
5	12	I will choose Roll and I do not mind If A even get higher payment.	P	ND	R
5	13	I hope you will choose IN, I 'll roll and both if us have the benefit from cooperation. Better cooperation, better earning.	P	ND	R
5	14	I think it is a good idea to choose "IN" for A. Then I will choose "ROLL".	P	D	R
5	15	I would like to cooperate.	NP	D	R
5	16	If u choose in and the die comes up 2-6 u will receive €12 and I €10. So it is a win/win for both of us. Good luck.	NP	D	DR
5	17	Please choose in, and I promise to roll the die. You'll have a great chance to receive €12. That's a good result for both of us.	P	D	R

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
5	18	Hope you choose "IN" great chance for both of us to get more money.	NP	ND	DR
5	19	I am a person who really cares about fairness. So, no matter what you choose, I will choose ROLL. This is the most profitable and fair decision that I can make for the benefit of us both.	P	ND	DR
5	20		NP	D	R
6	11	You choose IN, I choose ROLL. You have 5/6 chance almost guaranteed. We both go home happy instead of only €5.	P	ND	DR
6	12	I will choose "ROLL".	P	ND	R
6	13	I will Roll the dice, since €10>€5	P	ND	DR
6	14	Let's win some money!	NP	D	DR
6	15	I am usually in advantage case I know. But if you wanna DO BUSINESS with ME for BOTH of US have a chance to earn HIGHER, Please choose IN. I WILL ROLL THE DICE!!! Why? Because; 8.5 or 10 or 14. The differences are not so much in this case for me to cheat you. Believe in me or not depends on you. Once again, I WILL ROLL, no matter what your choice is. Thank.	P	ND	DR
6	16	Let's cooperate!!! Both of us can gain more!! Thanks!	NP	D	DR
6	17	Pls choose IN, and I will choose to ROLL. In this case , you have a much higher return, say, €12 than €5. As for me, both €14 and €10 are much better than €5. So hope you choose IN, and both of us get a win-win. Thank you.	P	D	DR
6	18	Dear friend, please choose IN. I promise you I will choose to ROLL. You can trsut me, I don't want you to leave with "0" money. We are all in need of money in the end. In case you choose IN there is a very very big possibility that you get €12, and we go home both happy. It is much better than just €5. So choose IN :)	P	D	R
6	19	I am ready to give Four Euro's up, your choice.	P	D	R
6	20	Hello, If you get this message accept my assurance that I gonna ROLL and this will increase your A's average income. I'd like to write my ANR and name so that you'd be sure, but unfortunately I can't.	P	ND	DR

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
7	11	Do what you want.	NP	ND	DR
7	12	A choosing IN and B choosing roll creates - a chance of 100% for B to get 10 euros - a chance of about 83% for A to get 12 euros	NP	D	R
7	13		NP	D	DR
7	14	"Life is a rollercoaster, then it drops"	NP	ND	DR
7	15	Do not choose OUT	NP	D	DR
7	16		NP	ND	DR
7	17	I will choose ROLL. When you choose IN we both have a big opportunity to receive 10euro(me) or 12 euro (you if die=2,3,4,5,6). A smile.	P	D	DR
7	18		NP	D	DR
7	19		NP	ND	DR
7	20		NP	ND	DR
8	11	Choose IN please, I'll Roll then.	P	ND	DR
8	12	Let's cooperate to have the best outcome with an expected revenue of 12*1/6+10=20euro which means you choose IN and I choose roll	P	ND	R
8	13	If you choose IN than I will choose Roll. So we both have a good pay-off (unless the die =1)	P	ND	DR
8	14	I will choose to Roll the die, so that you have more than 80% chances to get 12 euros :). Choose IN, it's only a game.	P	D	R
8	15		NP	D	R
8	16	When you will choose IN, I will choose to roll the die.	P	ND	R
8	17	I will definitely choose Roll, if you choose IN.	P	ND	DR
8	18	To get more payoffs we could cooperate. I will not choose "Don't Roll", which gives you incentive to chosse In. Then you will get expected payoff of 10 euros, which is definitely better than receiving only 5 euros for both of us. You should consider it carefully.	P	D	DR
8	19	Please choose IN	NP	D	R
8	20	If you choose IN and I choose Roll it's a fair game for both.	NP	D	DR
9	13	You choose IN and I will choose Roll, that means you have the chance of 5/6 to receive 12 euros and I will receive 10 euros, while if you choose OUT your expected return may be 5 euros.	P	D	DR

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
9	14	I will choose Roll. You should choose IN to earn 12 euros.	P	ND	DR
9	15	It is better for us if you choose IN because I will choose Roll and if that your expected earning will higher than choosing Out, you wstill have 5/6 chances to get 12.	P	D	R
9	16	If you choose IN , I promise I will choose the option Roll.	P	ND	DR
9	17	Strategy don't roll strictly dominates Rollfor B. Thus B may choose "Roll" as optimal strategy.	NP	D	DR
9	18	hey! I'll Roll, for sure!	P	D	R
9	19	In order to benefit both of us in this experiment, I think we can choose "in" and "Roll".	NP	D	R
9	20		NP	ND	DR
9	21	A -> IN => B-> ROLL ==> Ex(Ra) = 10$, RB=10$.	NP	ND	DR
9	22	I promise I will choose Roll.	P	ND	DR
9	23	Whatever the decision you made, you will earn 3 euro just participating this session. Then; if you choose OUT you will earn extra 5 euro but if you go on to IN option; there is a high probability to earn 12 euro extra since after rolling die 5/6 prob->get 12 euro, 1/6 prob -> get 0 euro. -> Thus; just try your chance and go IN option at the end the max will be 12+3=15 euro(max) but in out option you will get (max) only 5 euro and since money is as if an extra in any case take risk and choose IN.	NP	D	R
9	24	I think win-win is better! Die=1 only has 1/6 probability, maybe we can try it! The best strategy is cooperation!	NP	ND	DR
10	13	Hi, If you choose IN, I promiss I will choose Roll. When I don't ask this, you will probably choose OUT SO IT'S FOR YOU MUCH BETTER AND FOR ME TOO. You can trust me, I will choose 'roll, but I understand that you may be hesitate about this. However, I am honest :-)	P	ND	DR
10	14	I decided to Roll a die, let's make our common outcome bigger!	P	ND	R
10	15	The win-win situation should be u choose IN and I choose Roll. Your expected return would be 12*5/6=10, twice as much as you can earn by choosing Out! Trust me, 14 euros and 10 euros makes no difference to me, I will choose Roll.	P	D	R

Continues

Table C.I - *Continued*

Sess.	ID	Message	C	S	Choice
10	16	You IN, I Roll we are both better off.	P	ND	DR
10	17	B will roll	P	D	DR
10	18	I will choose ROLL. Please trust me and choose IN so that you have a good chance to earn 12 euros instead of 5 euros.	P	ND	DR
10	19	Please choose in and I will chose Roll. There is 5/6 probability for you to earn 12 euros.	P	D	R
10	20	I have a proposal. If you choose In. I promise! I will choose Roll so it's a 5/6 chance that if I roll the die , you will receive 12 euros, and I will receive 10 euros.	P	D	DR
10	21	Hi A, I think you should choose In! I promise you that I will Roll the die, the chance that I will throw 2,3,4,5, or 6 is really high. I think we both get the best out of this test then. Greetz B.	P	D	DR
10	22	Hi, I will choose Roll THE DIE. In this case you will have a 5/6 chance of getting 12euros (on top of the 3 euros). I will choose Roll because if you choose IN, It will give me 5 euros extra. Kind regards, B	P	ND	DR
10	23	Hi, The best chance of getting + 10 euros is to roll the dice and you choose IN. Chance of getting 12 euros for you and 10 euros for me is than 5/6. That would be fair.	NP	ND	DR
10	24	If you choose IN, I promise I will choose Roll, because in that case we both can earn more.	P	D	DR

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